

ABSTRACT OF THE DISCLOSURE

Methods, articles of manufacture, and apparatus are provided for depositing a layer, planarizing a layer, or combinations thereof, a material layer on a substrate. In one embodiment, an article of manufacture is provided for polishing a substrate, comprising a polishing article having a polishing surface, a plurality of passages formed through the polishing article for flow of material therethrough, and a plurality of grooves disposed in the polishing surface. The article of manufacture may be used in a processing system. The article of manufacture may be used in a method for processing a substrate, comprising positioning the substrate in an electrolyte solution containing a polishing article, optionally depositing a material on the substrate by an electrochemical deposition method, and polishing the substrate with the polishing article.